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## 29. *CYNOGLOSSUS LACHNERI* MENON (PISCES: CYNOGLOSSIDAE) — A NEW RECORD FROM INDIAN WATERS (BAY OF BENGAL, OFF VISAKHAPATNAM)

Menon (1977) while reviewing the systematics of *Cynoglossus* spp. from Indian waters held that thirteen species remain valid, after considering the synonymies of the species reported earlier. Three specimens of *Cynoglossus* sp. collected from the trawl catches off Visakhapatnam were found to be different from the species occurring in the Indian waters as described in the monograph by Menon (*op. cit.*). These specimens were found to bear a close resemblance to *C. lachneri*, described as a new species by Menon (*op. cit.*), who reported their occurrence from the waters off East Africa, Arabia and Red Sea (Mozambique coast northward to Red Sea and Gulf of Oman and eastward to Anjouan and Nossi-Be Islands and Seychelles). Their occurrence in the Bay of Bengal of the east coast of India extends their distributional range eastwards. Since the occurrence of *C. lachneri* in Bay of Bengal is a new record a detailed description is given, and compared with the description given by Menon (*op. cit.*) (Table 1).

*Material*: Three specimens (17.1-25.0 cm SL) were collected from trawl catches, land-

ed at Visakhapatnam fishing harbour (Two specimens on 28.ix.80 from a trawler whose fishing operations extended up to Paradip in the north and one specimen on 24.x.81 from a trawler whose fishing operations were limited to the coast off Visakhapatnam).

*Description*: Depth of body 24.56-25.67 (M\*=25.01), length of head 19.60-21.63 (M=20.65) per cent of SL. Diameter of eye 10.20-10.86 (M=10.62), interorbital width 8.10-8.69 (M=8.29) per cent of HL. Two nostrils on ocular side, anterior one tubular, on the upper lip, situated almost vertical through the anterior border of upper eye, posterior one a simple opening, in anterior half of interorbital space. Two nostrils on blind side, the tubular anterior one on the anterior half of the upper lip, the posterior a little higher and above posterior half of upper lip. Snout rounded, 32.60-35.13 (M=34.14) per cent of HL. Rostral hook rather short, scarcely reaching vertical through front border of lower eye. Maxillary extending beyond hind border of lower eye; angle of mouth extending below

\*M = mean of the range.

vertical from posterior border of fixed eye, distinctly nearer to tip of snout than to branchial opening; snout to angle of mouth 43.47-46.93 (M=45.44), angle of mouth to branchial opening 52.17-56.75 (M=54.67) per cent of HL.

*Scales:* Ctenoid on ocular side, except those on lateral lines; scales on blind side and those on lateral lines of ocular side cycloid.

*Lateral Line System:* Two lateral lines on ocular side, mid lateral line with 103-107

TABLE 1

COMPARISON OF MORPHOMETRIC AND MERISTIC CHARACTERS OF SPECIMENS OF *C. lachneri*, OFF VISAKHAPATNAM WITH THE DESCRIPTION GIVEN BY MENON (1977)

| S. No. Character  | Region  |   |
|---|---|---|
|   | Bay of Bengal<br>(East Coast of India)  | East Africa, Arabia<br>and Red Sea  |
| 1. Depth of body<br>(% of SL)                           | 24.56-25.67 (M=25.01)   | 24.62-27.19 (M=25.95)   |
| 2. Length of head<br>(% of SL)                          | 19.60-21.63 (M=20.65)   | 17.48-23.14 (M=19.43)   |
| 3. Diameter of eye<br>(% of HL)                         | 10.20-10.86 (M=10.62)   | 7.41-10.89 (M= 9.34)  |
| 4. Interorbital width<br>(% of HL)                      | 8.10- 8.69 (M=8.29)   | 6.98- 9.76 (M= 8.20)  |
| 5. Snout length.<br>(% of HL)                           | 32.60-35.13 (M=34.14)   | 28.40-34.26 (M=31.47)   |
| 6. Snout to angle of mouth.<br>(% of HL)                | 43.47-46.93 (M=45.44)   | 45.73-50.00 (M=47.02)   |
| 7. Angle of mouth to<br>branchial opening.<br>(% of HL) | 52.17-56.75 (M=54.67)   | 50.00-55.81 (M=52.84)   |
| 8. Mid lateral line scales on<br>ocular side.           | 103-107   | 100-111   |
| 9. Interlinear scale rows.                              | 15-16   | 16-18   |
| 10. Dorsal fin rays.                                    | 111-113 (M=112)   | 113-121 (M=117)   |
| 11. Anal fin rays.                                      | 91-93 (M=92)  | 92-98 (M=96)  |
| 12. Caudal fin rays.                                    | 10 in two specimens.  | 10 in seven specimens.  |
| 13. Vertebrae.  | 55-57, comprising 9 abdominal and<br>46-48 caudal elements in 2 specimens<br>(radiographs).   | 55-58, comprising 9 abdominal and<br>46-49 caudal elements in 7 speci-<br>mens (radiographs). |
| 14. Coloration (in<br>preserved specimens).             | Dorsally uniformly dark brown,<br>lower whitish in two specimens col-<br>lected on 28-9-80. Upperside light<br>brownish with irregular dark patches<br>on body and an irregular darker<br>patch on operculum, lower whitish<br>in specimen collected on 24-10-81. | Dorsally uniformly dark brown,<br>lower whitish.  |

## MISCELLANEOUS NOTES

scales, 15-16 scales between two lines. Two lateral lines on blind side.

*Fins*: Dorsal with 110-113, anal with 91-93 rays, caudal 10 in two specimens (In the third specimen caudal showed signs of regeneration).

*Vertebrae*: 55-57, comprising 9 abdominal and 46-48 caudal elements in two specimens (radiographs).

### Coloration:

Specimens collected on 28.ix.80: In fresh condition, ocular side brownish with darker and somewhat round blotches, blind side whitish. Fin rays yellowish. Formalin preserved specimens uniformly dark brown on ocular side, whitish on blind side. Specimen collected on 24.x.81: In fresh condition, ocular side yellowish brown with somewhat darker irregular patches distributed on the body and fins. An irregular dark patch on opercular region. Fin rays yellowish, blind side whitish. Formalin preserved specimen light brownish with irregular darker patches on body and fins, an irregular dark patch on opercular region on ocular side, whitish on blind side.

*Diagnosis*: The present specimens agree with the description of *C. lachneri* given by Menon

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(1977) in all respects, excepting the slight variation observed in the case of interlinear scale count and extension of the lower range of dorsal fin rays and anal fin rays (Table 1). These differences may be attributed to geographic variation.

REMARKS: Norman (1934), citing the results of the experiments conducted by Sumner (1911), Mast (1916), and Kuntz (1918) showed that flat fishes possess remarkable powers of changing their coloration, to simulate the substratum on which they lie. The variation in coloration among the specimens of *C. lachneri* collected at Visakhapatnam shows their variability in relation to the possible changes in the nature of the substratum.

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